

Clean Energy States Alliance
State Leadership in Clean Energy Webinar Series

**Economic Development and Job Growth
in Massachusetts and New Mexico**

Hosted by
Warren Leon, Executive Director, CESA
Monday, December 8, 2014

Housekeeping



All participants are in “Listen-Only” mode. Select “Use Mic & Speakers” to avoid toll charges and use your computer’s VOIP capabilities. Or select “Use Telephone” and enter your PIN onto your phone key pad.

Submit your questions at any time by typing in the Question Box and hitting Send.

This webinar is being recorded.

You will find a recording of this webinar, as well as all previous CESA webcasts, archived on the CESA website at

www.cesa.org/webinars

About CESA

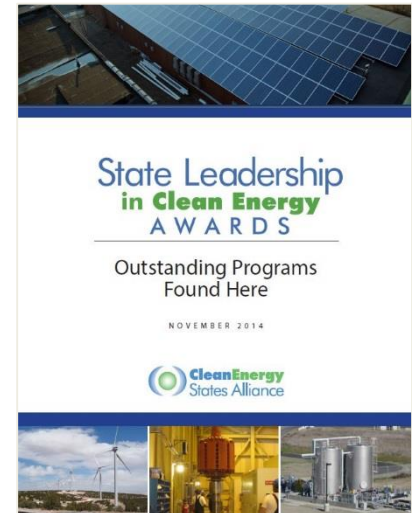
Clean Energy States Alliance (CESA) is a national nonprofit organization working to implement smart clean energy policies, programs, technology innovation, and financing tools, primarily at the state level. At its core, CESA is a national network of public agencies that are individually and collectively working to advance clean energy.

About the State Leadership in Clean Energy Awards

CESA's State Leadership in Clean Energy Awards recognize state and municipal programs and projects that demonstrate leadership, effectiveness and innovation in advancing renewable energy and other clean energy technologies.

An independent panel of distinguished judges selected eight recipients for the 2014 Awards. More information, including case studies and links to upcoming webinars featuring the winning programs, is available on our website:

www.cesa.org/projects/state-leadership-in-clean-energy/2014



Today's Guest Speakers

Tamika Jacques, Director of Workforce Development,
Massachusetts Clean Energy Center

Andrew Chabot, Program Manager, Workforce
Development, Massachusetts Clean Energy Center

Erica Velarde, Clean Energy Program Manager, New
Mexico Energy Conservation and Management Division





Massachusetts Clean Energy Internship Program

Tamika Jacques

Director of Workforce Development

Andrew Chabot

*Program Manager – Workforce
Development*



Our Mission

- **Create** high-quality jobs and long-term economic growth
- **Accelerate** clean energy technologies, companies and projects
- **Cultivate** a robust marketplace for innovation
- **Support** municipal clean energy projects
- **Invest** in residential and commercial renewable energy installations



Massachusetts Clean Energy Industry is Significant

\$10 Billion Industry
2.5% of Gross State Product

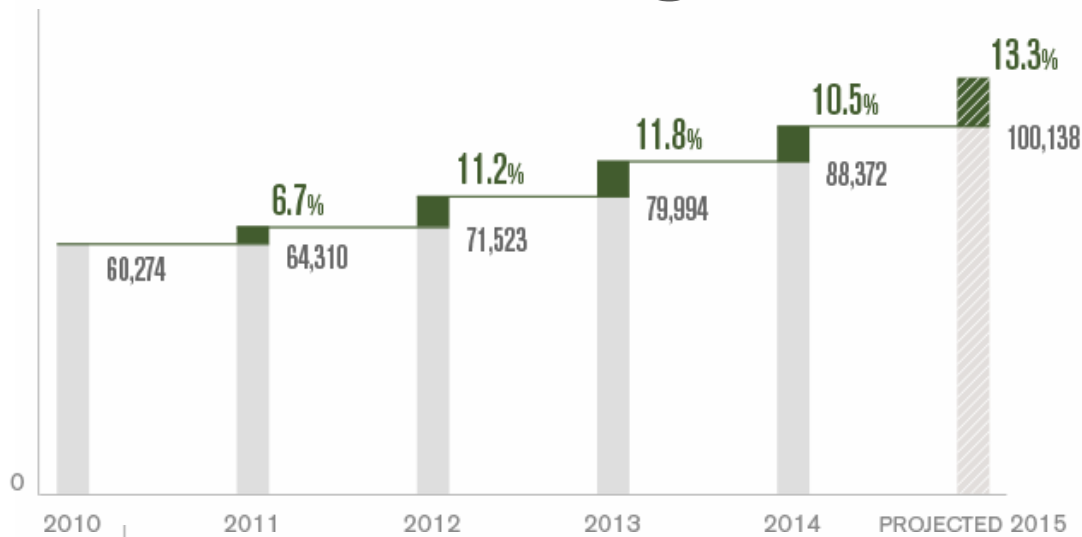
88,372 jobs

2.4% of total Massachusetts workforce

5,985 firms

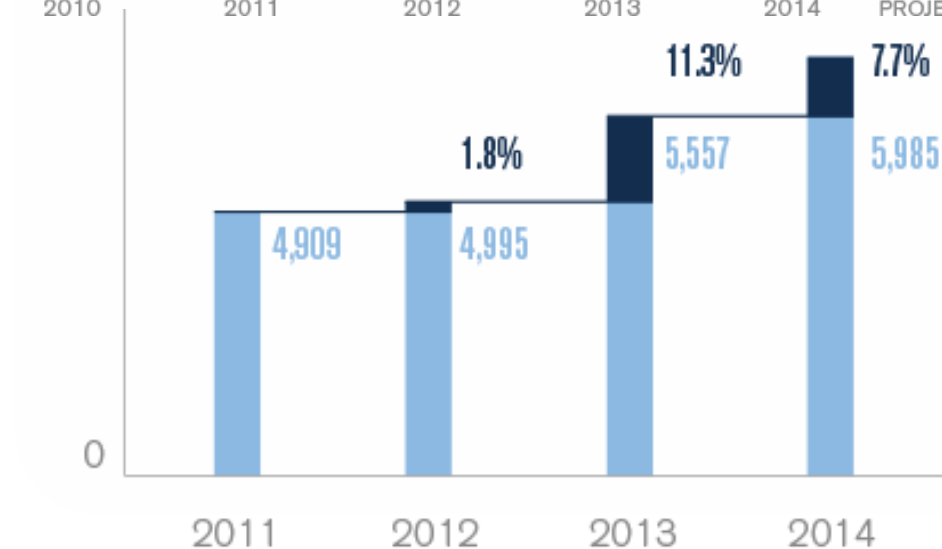
2.7% of total Massachusetts companies

Strong Historic Growth



47% GROWTH RATE

+28K WORKERS



**ANNUAL GROWTH OF JOBS
(ABOVE) AND FIRMS (BELOW)**



Hiring is Increasingly Difficult

About 1 in 5 businesses report great difficulty finding workers (up from 1 in 10 in 2013)

Nearly 1 in 4 businesses face difficulty finding experienced workers

Firms are still “making do” but concern is growing



Clean Energy Internship Program

Internship opportunity for college students at Massachusetts-based clean energy companies

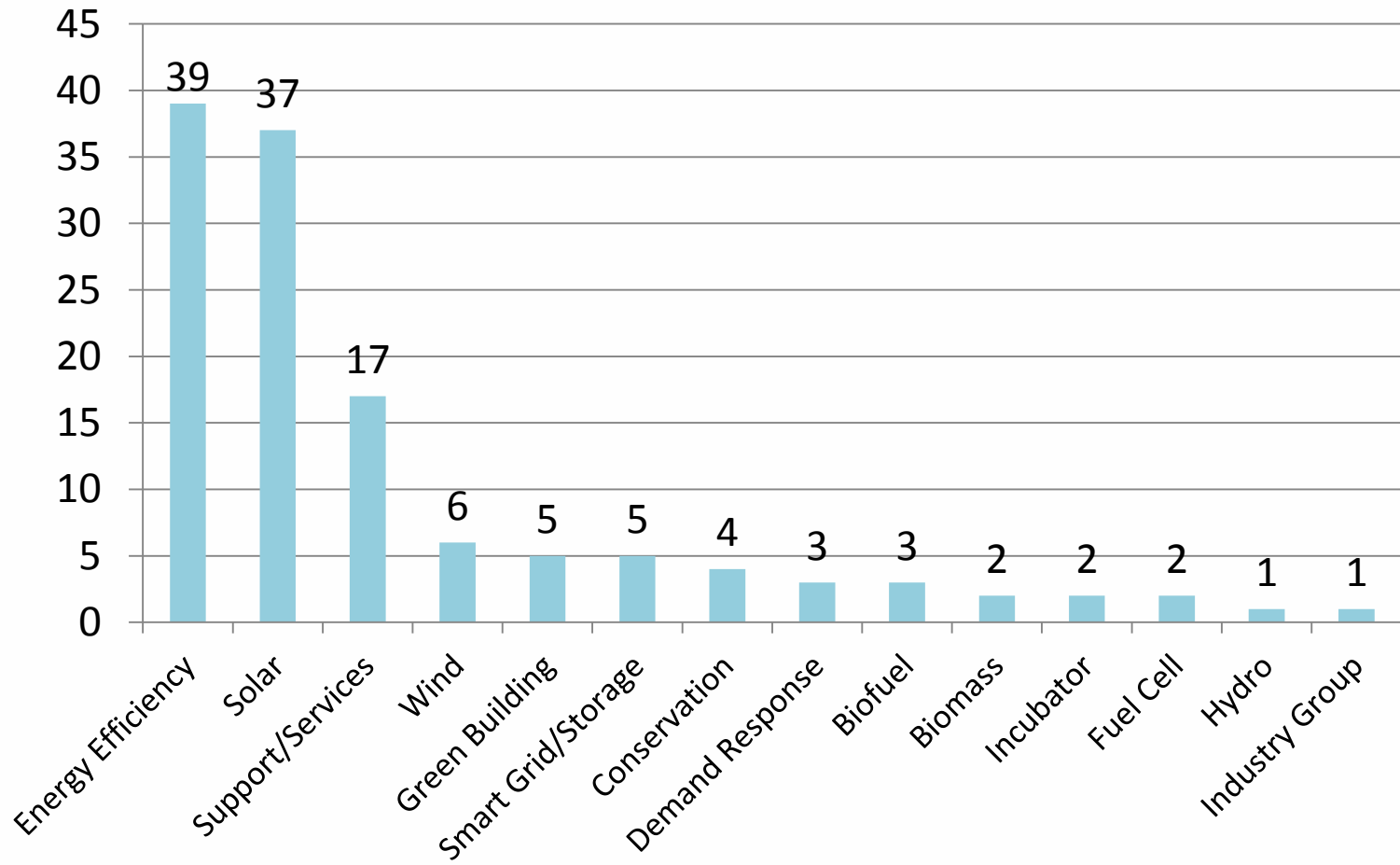
- Placed over **952 interns at more than 228 companies** since 2011
- **70 students have gained full or part-time employment** at host companies
- Record number **145 companies, 1000 interns** applied in Summer 2014



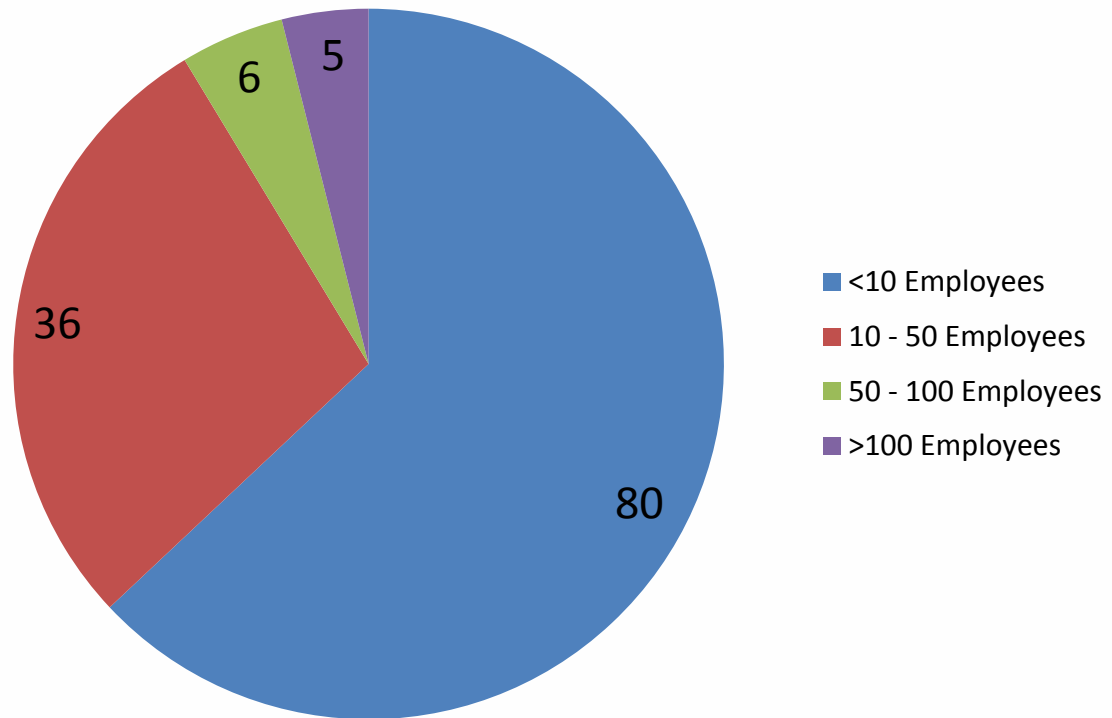
Internship Program Logistics

- 1) MassCEC staff update the session's program documents and complete an internal legal review of materials
- 2) Press release is issued and employers/students are informed that enrollment for the upcoming session is open
- 3) Employers/students submit their electronic applications to MassCEC
- 4) Employers select interns, confirm their eligibility with MassCEC, and submit signed offer letters – employer's funding is reserved
- 5) Employers receive their award letter, which they must sign and return, as well as reimbursement instructions from MassCEC
- 6) At the conclusion of the session, the employer completes their mandatory survey and submits their reimbursement package

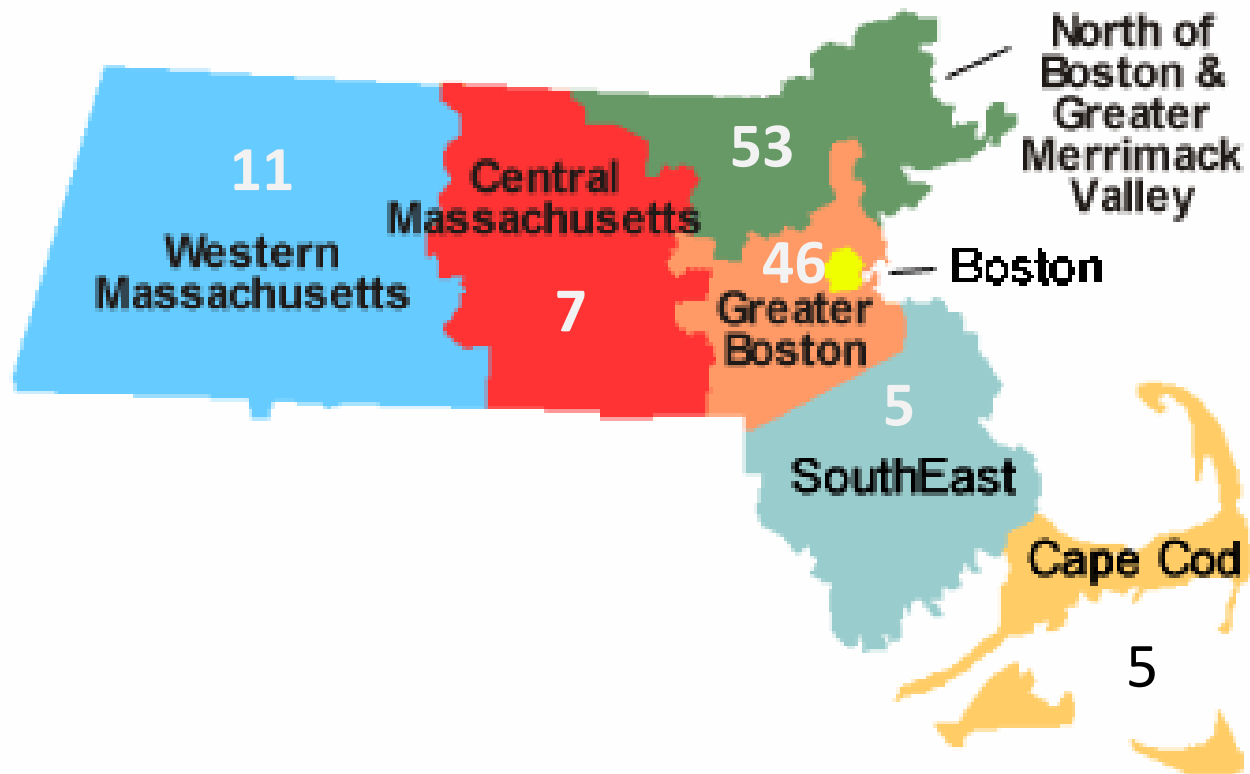
Summer 2014 Companies by Subsector



Summer 2014 Employees per Host Company



Summer 2014 Employers by Region





2014 Summer Student Demographics

Applicants

Major

Engineering:	36%
Business:	19%
Natural Sciences:	16%
Other:	29%

Gender

Male:	64%
Female:	36%

Participants

Major

Engineering:	29%
Business:	14%
Natural Sciences:	15%
Other:	42%

Gender

Male:	60%
Female:	40%



Clean Energy Internship Program

Internship opportunities for college students at Massachusetts-based clean energy companies:

Successes to Date

- Nationally recognized award-winning program
- Placed over **952 interns** at more than **228 companies** since 2011 (as of 12/5/14)
- **70 students** have gained full or part-time employment at host companies
- Record number **145 companies, 1000 interns** applied in Summer 2014
- Overwhelming participant satisfaction with the internship program

Program Logistics

- Spring 2015 session runs from **Jan 1 - May 31**
- Companies may take on up to **3 interns per session** and participate in all **3 sessions** during the year
- Students work at their host companies for up to **10 weeks**
- Students and employers send in their materials via www.masscec.com/intern
- Employers reach out to students in the database directly and confirm student eligibility with MassCEC
- Employers seek reimbursement from MassCEC at the end of the session



2014 Summer Internship Program Employer Feedback

- **99%** of employers felt their intern(s) met the job requirements and tasks, stated in their job descriptions
 - **97%** of employers said they would consider hiring their intern(s) if a position was open
 - **96%** of employers said their intern(s) received training and/or mentoring, focused on a specific area
-
- **“The CEC enabled us to hire an intern to do some work that would have taken an engineer off of other assignments to do. The intern worked out, so we hired him to assist us.”**
 - **“I am continually impressed with the MA CEC Program. We are able to pay our interns because of the program and it allows us to be competitive and fair with the interns. Thanks for all you do and keep up the great work!”**
 - **“The MA Clean Energy Internship Program is probably the best spent money administered by the MassCEC. Both our company and the interns benefited strongly from the support. Our company could not have gone so far in our pilot projects without the interns. And we know that the interns learned a great deal and enjoyed their time with us.”**



2014 Summer Internship Program Student Feedback

- **99%** of students would recommend this program to others
 - **92%** of students would return to work at their host companies if there was an open position
 - **95%** of students said that their internship was relevant to their major or career interests
-
- **“I loved the office culture, the people involved, the enthusiasm, energy, and knowledge behind every person and action. I feel like my ideas and actions were heard, and that I could grow in this company. If I were offered a position in this company I would take it.”**
 - **“I can't begin to express how much knowledge I have gained regarding the clean energy industry because of this great internship.”**
 - **“I have the opportunity to see it and work hands on in a net zero energy project. I've been applying all my knowledge from school to this specific project.”**
 - **“I specialize in Alternative Energy Systems so my internship was perfect for my major.”**



Join Us Online

Massachusetts Clean Energy Internship Program:

www.masscec.com/intern

Clean Energy News Digest (daily) and Clean Energy Events Email (biweekly): www.masscec.com/content/email-updates



@MassCEC



MassCEC Clean Energy Group



Questions?

Massachusetts Clean Energy Internship Program:

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internships@masscec.com

Tamika Jacques

Director of Workforce Development

Andrew Chabot

Program Manager – Workforce Development

New Mexico's Renewable Energy Production Tax Credit



N E W M E X I C O



Energy, Minerals and Natural Resources Department

ECMD MISSION

MISSION: The Energy Conservation and Management Division (ECMD) develops and implements effective clean energy programs—renewable energy, energy efficiency, alternative fuels, and safe transportation of radioactive waste—to promote economic growth, environmental sustainability, and wise stewardship of our natural resources while protecting public health and safety for New Mexico and its citizens.

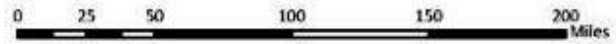
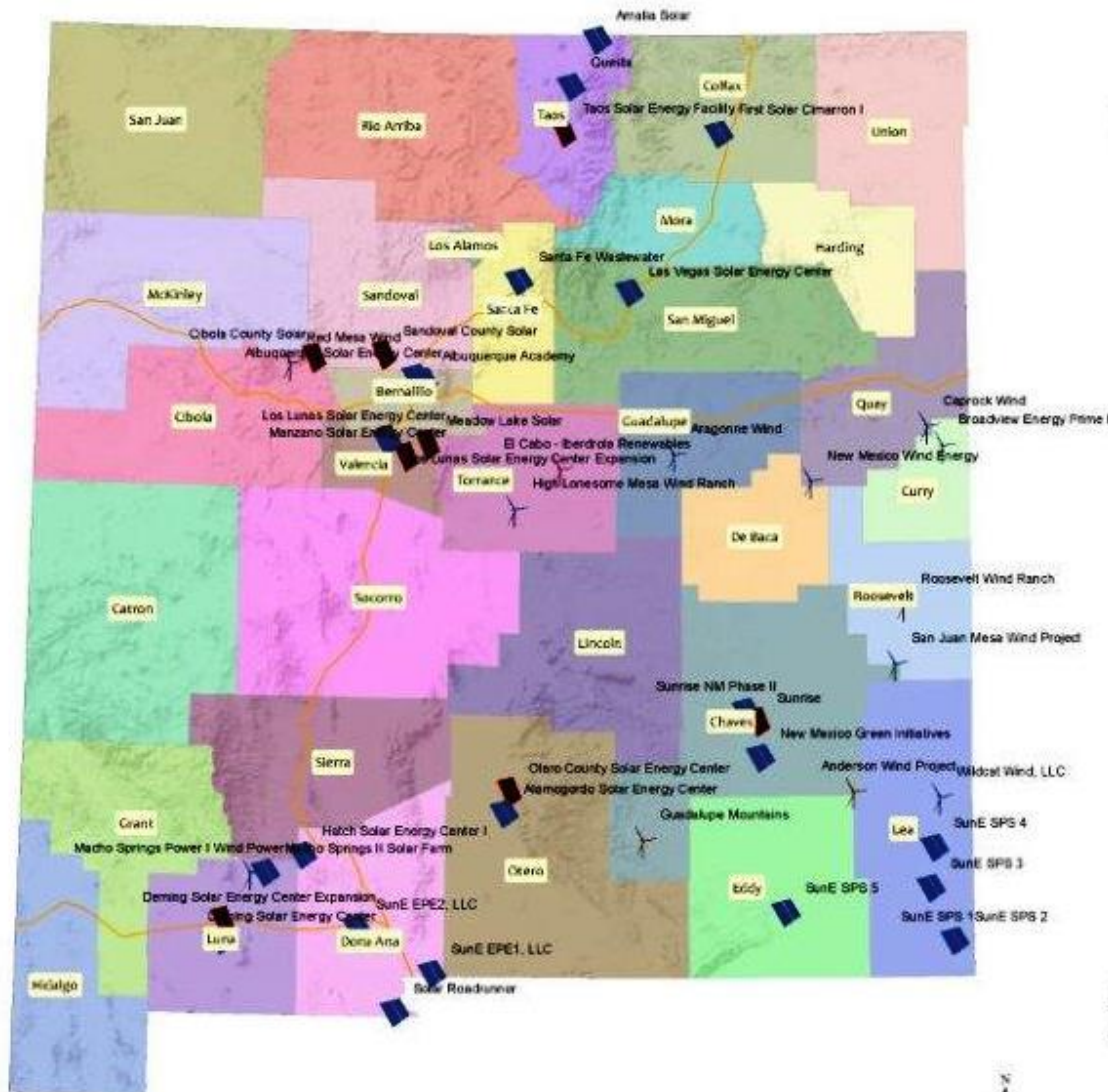


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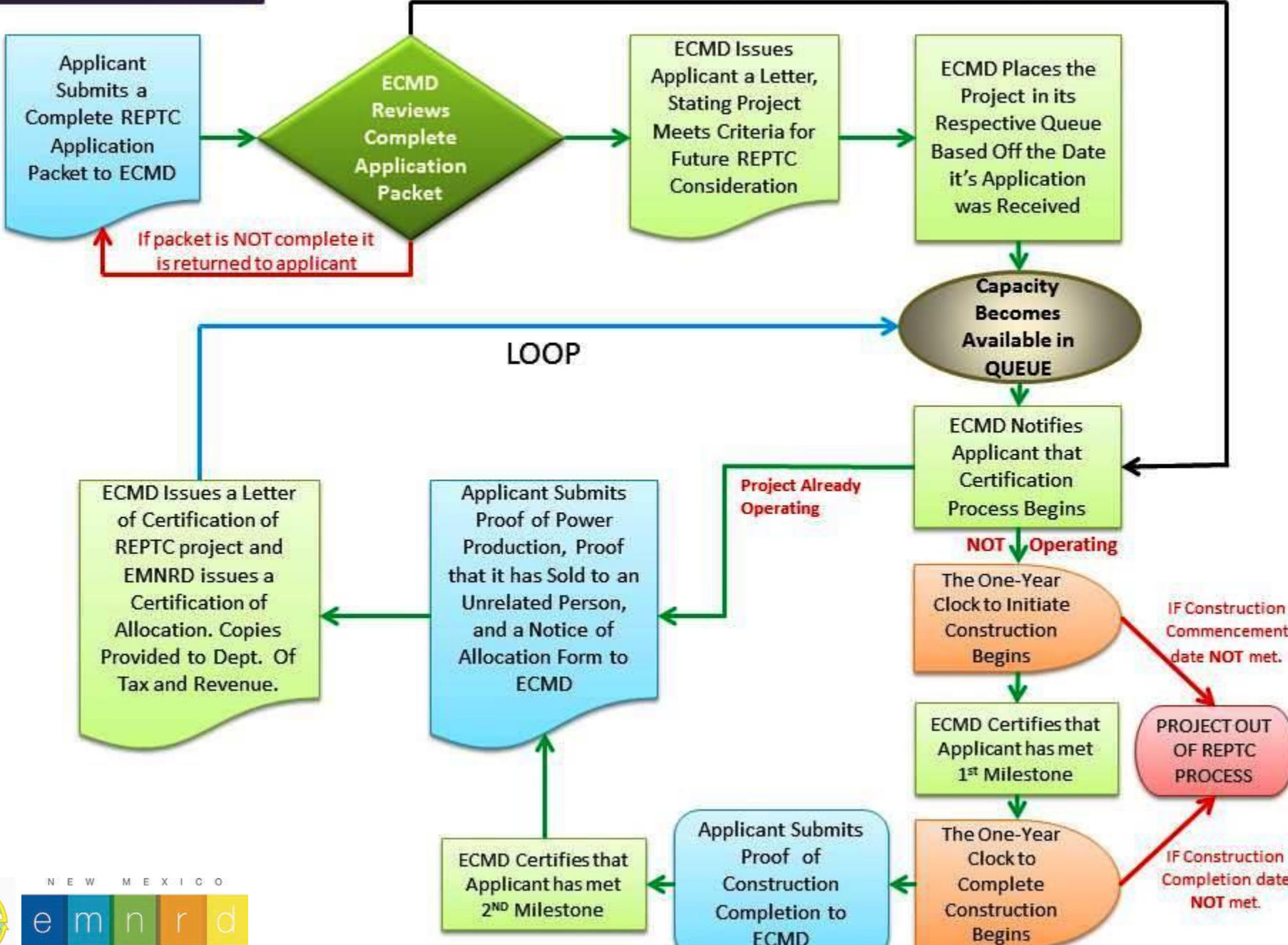
Energy, Minerals and Natural Resources Department

Renewable Energy Production Tax Credit Map



ECMD REPTC PROCESS

ORIGINAL PROCESS—When there was Capacity Available in the QUEUE



REPTC Wind Queue

WIND / BIOMASS QUEUE								
Statute Provision: NMSA 1978, 7-2A-19								
Tax Credit Incentive: \$0.0100 per kilowatt-hour								
Eligible Technology: Wind, Solar, and Biomass								
Maximum Total Eligible Production: 2,000,000 Megawatt-hours per year								
Name of Energy Generator Facility	Capacity (MW)	Annual Production Eligibility (MWh)	Application Received Date	Application Approval (Pending Availability) Date	Application Approval Date	Certificate of Eligibility Date	Commenced Operation Date	Status / Comments
POST-ELIGIBLE								
New Mexico Wind Energy Center	204.0	400,000	5-Sep-03	--	26-Sep-03	9-Nov-04	1-Sep-03	operating; not eligible as of 1-Sep-13
CERTIFIED								
Caprock Wind Ranch	80.0	316,600	14-Oct-03	--	19-Dec-03	15-Sep-05	31-Dec-04	60 MW operating; 287,328 MWh/yr previously approved 19-Dec-03
San Juan Mesa Wind Project	120.0	400,000	29-Apr-05	--	12-May-05	20-Sep-06	22-Dec-05	+20 MW operating
Aragonne Wind Facility	90.0	275,861	24-Dec-05	--	29-Dec-05	13-Apr-07	29-Dec-06	operating
High Lonesome Mesa Wind Ranch	100.0	309,976	31-Aug-07	7-Jan-08	14-Apr-09	4-Nov-09	16-Jul-09	operating; 22,273 MWh/yr previously approved 25-Apr-08
Red Mesa Wind Energy Center	102.4	297,009	10-Jun-10	7-Jul-10	22-Feb-12	24-Feb-12	15-Dec-10	operating
Macho Springs I Wind Power	50.4	124,016	9-Sep-10	19-Oct-10	1-Sep-13	1-Sep-13	15-Nov-11	operating
Wildcat Wind, LLC	27.3	93,798	24-Apr-12	2-May-12	19-May-14	19-May-14	2-Jul-12	operating
Broadview Energy Prime	9.9	37,820	10-Jan-13	14-Feb-13	19-May-14	19-May-14	14-Feb-14	operating
Broadview Energy Prime II	9.9	37,435	10-Jan-13	14-Feb-13	19-May-14	19-May-14	14-Feb-14	operating
CERTIFIED TOTAL	589.9	1,892,515						
WAITING LIST								
Anderson Wind Project	15.0	52,560	15-Nov-11	14-Dec-11	--	--	--	Meets criteria; certification in process; projected operation 2014
Guadalupe Mountains	134.3	395,173	18-Jan-12	15-Feb-12	--	--	--	Meets criteria
El Cabo - Iberdrola Renewables	278.0	400,000	15-Jan-13	2-May-13	--	--	--	Meets criteria; 1,000 MW total
Roosevelt Wind Ranch	250.0	400,000	12-Jul-13	9-Oct-13	--	--	--	Meets criteria
WAITING LIST TOTAL	677.3	1,247,733						
REJECTED								
ESTANCIA(biomass)	35.0	274,000	7-Feb-11	21-Feb-11				Previously met criteria, but no production
WITHDRAWN								
Owaisa (Wind)	89.1	396,773	5-Dec-11	1-Feb-12				Previously met criteria; Withdrew application



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Energy, Minerals and Natural Resources Department

REPTC Solar Queue

SOLAR QUEUE								
Statute Provision: NMSA 1978, 7-2A-19								
Tax Credit Incentive:		\$0.0400	Maximum	\$0.0150	Minimum	per kilowatt-hour (see detailed \$/kWh schedule at NMSA 1978, 7-2A-19D)		
Eligible Technology: Solar only								
Maximum Total Eligible Production:		500,000 Megawatt-hours per year						
Plant	Capacity (MW)	Annual Production Eligibility (MWh)	Application Received Date	Application Approval (Pending Availability) Date	Application Approval Date	Certificate of Eligibility Date	Commenced Operation Date	Status / Comments
CERTIFIED								
First Solar Cimarron I	30.0	70,541	17-Apr-09	--	1-Jun-09	27-Jan-11	13-Oct-10	operating
Santa Fe Wastewater	1.1	2,493	1-Jul-10	--	10-Aug-10	3-May-11	3-Jan-11	operating
Hatch Solar Energy Center I	5.0	13,918	3-Sep-10	--	29-Sep-10	18-Oct-11	8-Jul-11	operating
Solar Roadrunner	20.0	52,980	10-Nov-10	--	17-Dec-10	28-Dec-11	29-Aug-11	operating
Albuquerque Academy	1.1	2,059	14-Dec-10	--	28-Dec-10	10-Mar-11	20-Dec-10	operating
SunE SPS 1	10.9	22,589	7-Feb-11	--	8-Mar-11	30-Jan-12	22-Sep-11	operating
SunE SPS 2	10.9	22,589	7-Feb-11	--	8-Mar-11	30-Jan-12	22-Sep-11	operating
SunE SPS 3	10.9	22,589	7-Feb-11	--	8-Mar-11	19-Apr-12	30-Nov-11	operating
SunE SPS 4	10.9	22,589	7-Feb-11	--	8-Mar-11	19-Apr-12	1-Dec-11	operating
SunE SPS 5	10.9	22,527	7-Feb-11	--	8-Mar-11	30-Jan-12	22-Sep-11	operating
Questa	1.0	2,329	16-Mar-11	--	27-Jun-11	--	1-Feb-11	operating
SunE EPE2, LLC	12.0	30,768	7-Sep-11	--	18-Oct-11	21-Jun-12	2-May-12	operating
SunE EPE1, LLC	11.3	26,751	25-Oct-11	--	23-Nov-11	26-Nov-12	25-Jun-12	operating
Macho Springs II Solar Farm	48.5	149,592	21-Nov-11	--	4-Jan-12	16-May-14	5-May-14	operating
Amalia Solar	1.5	2,897	5-Dec-11	--	22-Dec-11	27-Sep-13	20-Jun-12	operating
Los Lunas Solar Energy Center	5.0	11,388	6-Dec-11	--	25-Jan-12	20-Feb-12	7-Jun-11	operating
Deming Solar Energy Center	5.0	11,388	6-Dec-11	--	25-Jan-12	20-Feb-12	3-Aug-11	operating
Alamogordo Solar Energy Center	5.0	10,013	6-Dec-11	--	25-Jan-12	20-Feb-12	14-Oct-11	operating
CERTIFIED TOTAL	201.1	500,000						
WAITING LIST								
Alamogordo Solar Energy Center	--	1,375	6-Dec-11	26-Jan-12	--	--	--	operating; portion of production also is certified (see above)
Las Vegas Solar Energy Center	5.0	11,388	6-Dec-11	26-Jan-12	--	--	--	operating
Albuquerque Solar Energy Center	2.0	4,555	6-Dec-11	26-Jan-12	--	--	--	operating
Sunrise	2.9	4,988	25-Jan-12	21-Feb-12	--	--	--	
Sunrise NM phase 2	2.5	4,250	9-Feb-12	19-Apr-12	--	--	--	
Taos Solar Energy Facility	1.5	3,383	18-Jul-12	21-Feb-13	--	--	--	
Deming Solar Energy Center Expansion	4.0	9,209	27-Feb-13	29-Mar-13	--	--	--	operating
Los Lunas Solar Energy Center Expansion	2.0	4,539	27-Feb-13	29-Mar-13	--	--	--	operating
Manzano Solar Energy Center	8.0	18,157	27-Feb-13	29-Mar-13	--	--	--	operating
Otero County Solar Energy Center	7.5	17,269	27-Feb-13	29-Mar-13	--	--	--	operating
New Mexico Green Initiatives	2.9	5,145	10-May-13	17-Jul-13	--	--	--	operating
Green States Energy, Inc.	2.5	4,363	21-Nov-13	27-Jan-14	--	--	--	
Meadow Lake Solar	9.1	25,914	28-Feb-14	6-Mar-14	--	--	--	
Sandoval County Solar	6.1	16,830	28-Feb-14	6-Mar-14	--	--	--	
Emcore Solar New Mexico	2.0	2,451	12-Jun-14	14-Oct-14	--	--	--	
Cibola County Solar	7.6	21,318	18-Jul-14	25-Jul-14	--	--	--	
WAITING LIST TOTAL	65.6	155,134						

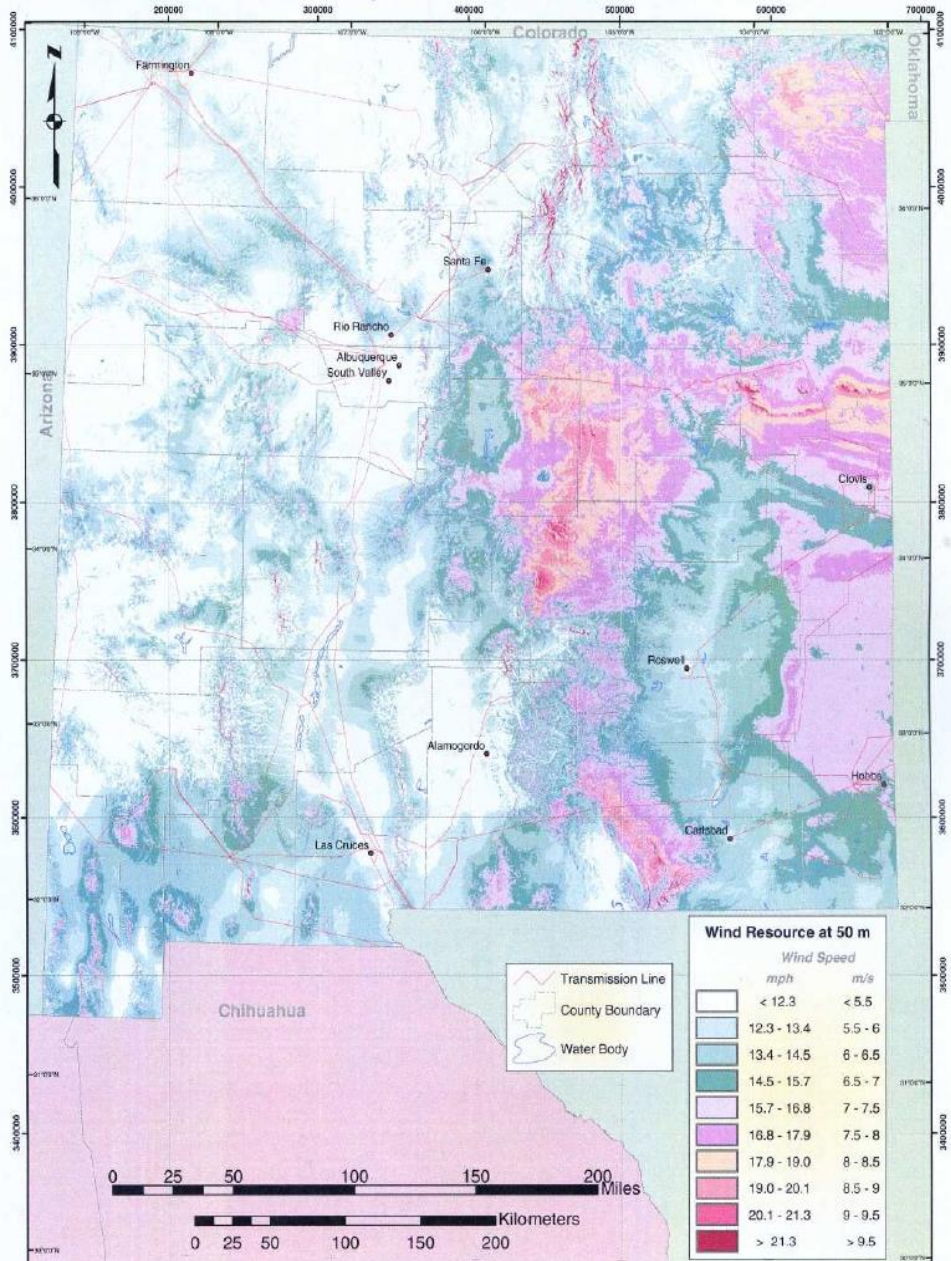


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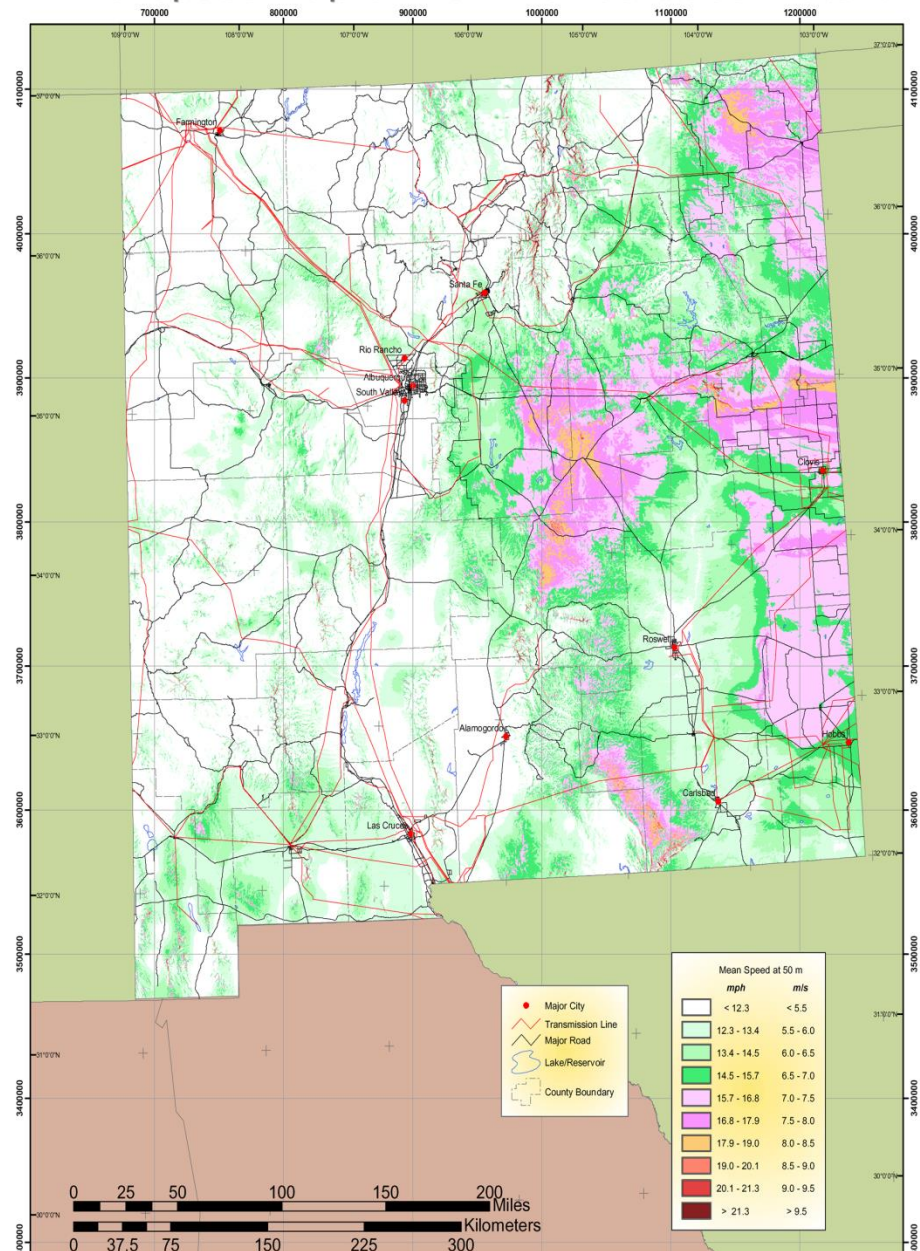
Energy, Minerals and Natural Resources Department

Wind Resource Map of New Mexico at 50 meters



2003 WIND MAPPING

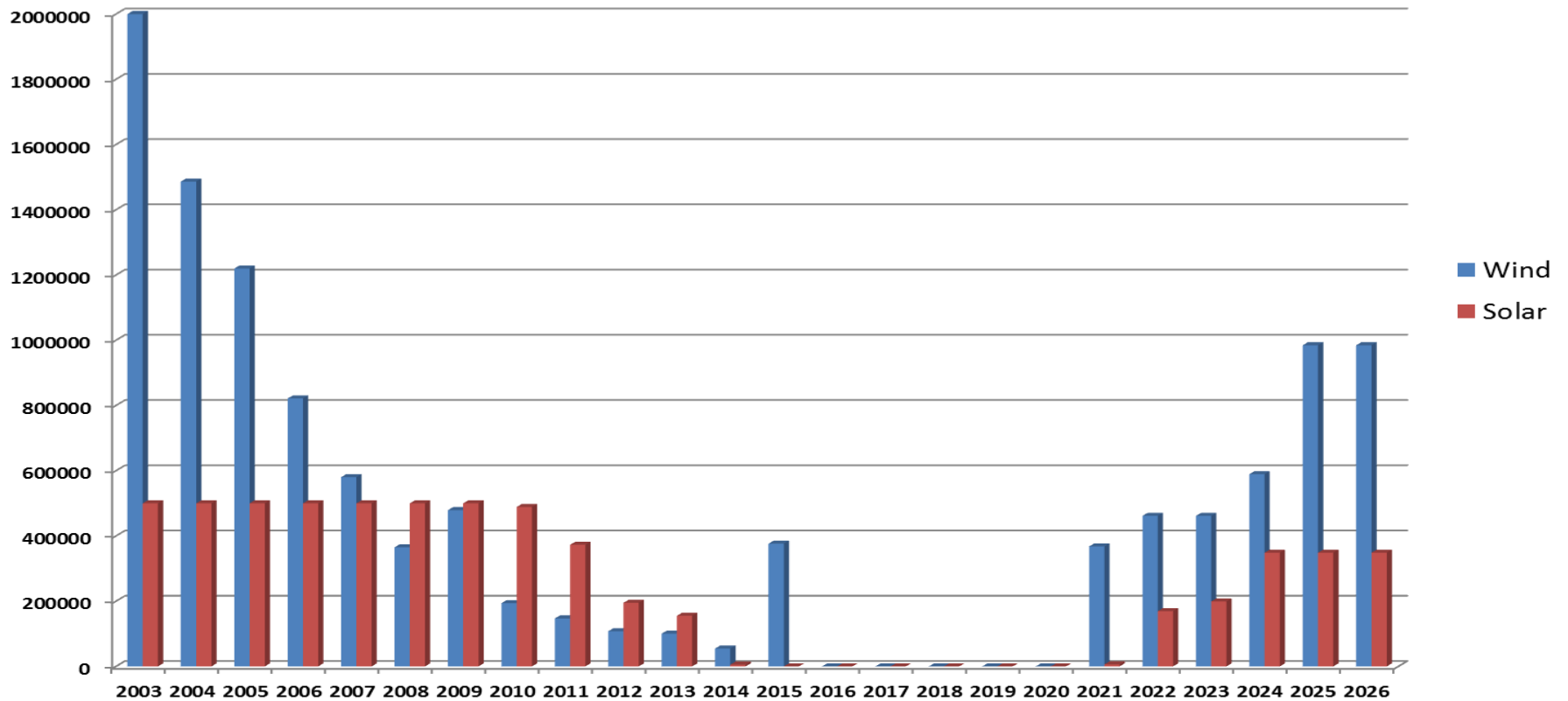
Wind Speed Map of New Mexico at 50 meters



2010 WIND MAPPING

REPTC History & Forecast

MWh Available



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Energy, Minerals and Natural Resources Department

Wind



- * 794 MW Currently Operating
- * 15 MW Operating Before 12/31/14
- * 712.3 MW on Waiting List
- * Over 1,700 MW being developed



Solar

- * 232.2 MW Currently Operating
- * 201.1 MW Operating are Certified
- * 65.5 MW on Waiting List
- * 235 MW Being Reviewed for Waiting List
- * Over 600 MW being developed



Project Name	Macho Springs	Sandia Science & Tech Park	SUNE SPS4	SUNE SPS3	Various Names	Union County Wind	El Cabo	NM Wind Energy Center	Caprock Wind	San Juan Mesa	TOTALS
Lease Expiration Year	2052	2060	2050	2050	2055	2059	2058	2038	2039	2040	
Location	Doña Ana County	Bernalillo County	Lea County	Lea County	Lea and Eddy Counties	Union County	Torrance County	Quay County	Quay County	Chaves and Roosevelt Counties	9 Counties
Technology	PV Solar	Concentrating PV Solar	PV Solar	PV Solar	PV Solar	Wind	Wind	Wind	Wind	Wind	5 solar / 5 wind
Project Size (MW)	48.6	2.0	10.0	10.0	200.0	500.0	1,000.0	204.0	62.0	120.0	2,156.6
Project Size (Acres)	590	36	200	200	2,000	50,000	80,000	16,160	9,840	13,757	172,783
Acres of State Trust Land	590	36	200	200	TBD	18,874	39,363	1,160	1,840	3,757	66,020
Acres of Private Land	0	0	0	0	300	31,126	40,637	15,000	8,000	10,000	105,063
Revenue	\$ 9,888,261.00	\$ 523,993.18	\$ 1,057,445.00	\$ 1,057,445.00	TBD	\$ 43,640,559.00	\$ 67,425,543.00	\$ 2,444,000.00	\$ 864,000.00	\$ 5,867,528.00	\$ 133,138,098.38
Water Saved by Project* (gallons)/year	108,038,251	4,321,530	27,009,563	27,009,563		558,500,000	1,117,000,000	223,400,000	69,254,000	134,040,000	2,268,572,907
CO2 Savings (tons)/annually	40,000	2,000	10,000	10,000		412,500	825,000	165,000	51,150	99,000	1,614,650
Jobs Created	330	13	83	83		TBD	938	1,876	375	116	225
During Construction	300	12	75	75	809		1,617	323	100	194	3,505
During Operation	30	1	8	8	130		259	52	16	31	534
Overall Economic Impact	\$ 292,000,000.00	\$ 11,680,000.00	\$ 73,000,000.00	\$ 73,000,000.00	\$ 550,000,000.00		\$1,100,000,000.00	\$ 220,000,000.00	\$ 68,200,000.00	\$ 132,000,000.00	\$ 2,519,880,000.00

2014 NM State Land Office Data



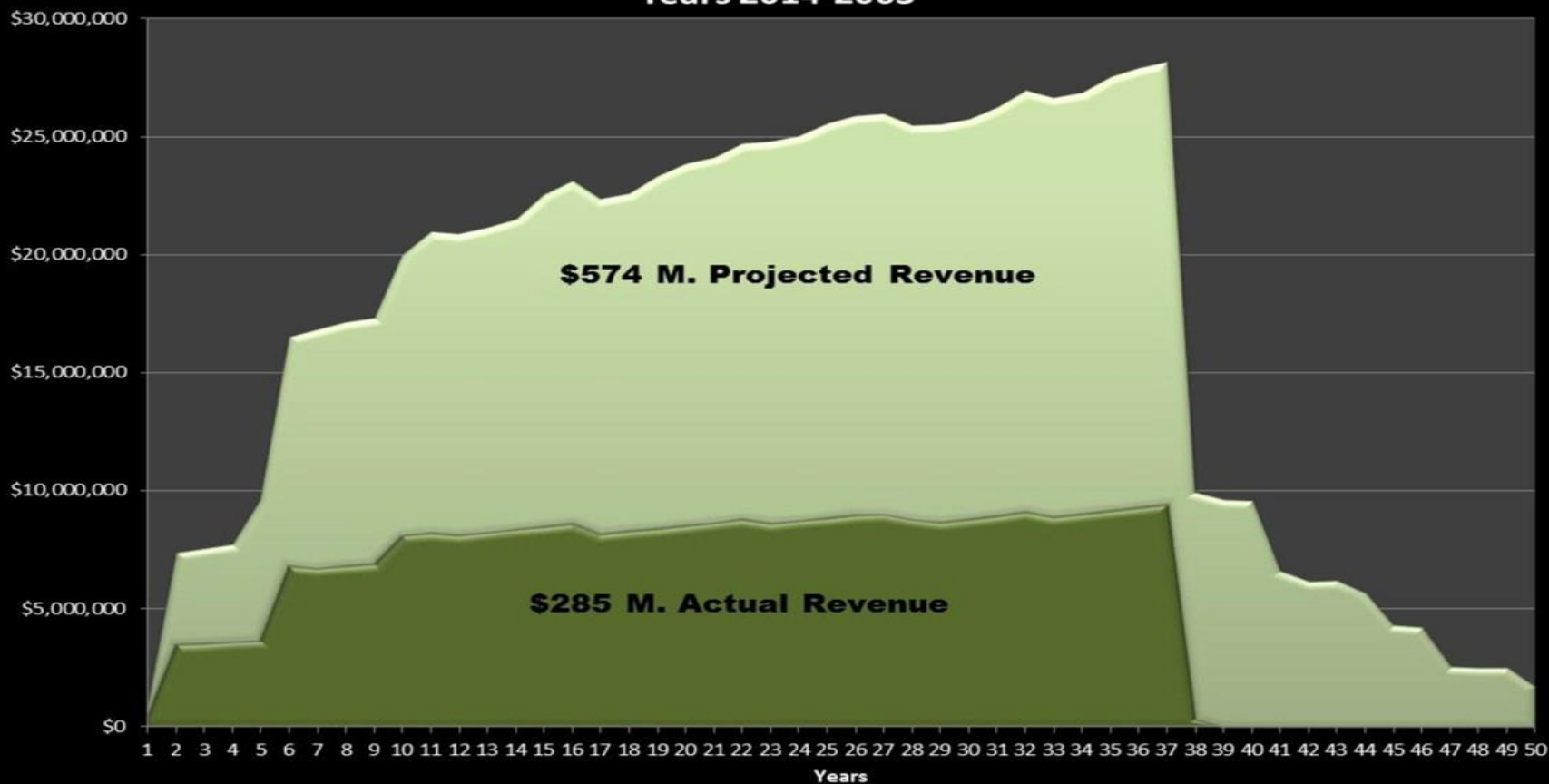
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Energy, Minerals and Natural Resources Department

State Land Office Revenue Projections

Renewables Actual and Projected Revenue
Years 2014-2063



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Projects on Private Land

- * WIND

- * TEN

- * SOLAR

- * TWENTY-NINE



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Energy, Minerals and Natural Resources Department

Creating Renewable Energy in New Mexico

- * **Unirac**, Develops & Manufacturing in Albuquerque, NM
 - * Employs approximately 200 people
- * **Array Technologies**, Manufacturing in Albuquerque, NM
 - * Employs approximately 200
- * **Emcore**, Corporate Headquarters & Manufacturing in Albuquerque, NM
 - * Employs approximately 400 people



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Energy, Minerals and Natural Resources Department

QUESTIONS?

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Energy, Minerals and Natural Resources Department

Thank you for attending our webinar

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www.cesa.org/projects/state-leadership-in-clean-energy/2014